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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,127

06/25/2004

Gang-Hoon Lee

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EXAMINER

KYLE, MICHAEL J

ART UNIT

PAPER NUMBER

3677

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/500,127

Applicant(s)

LEE ET AL.

Examiner

Michael J. Kyle

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12,14-17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12,14-17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4-6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katagiri (U.S. Patent No. 5,598,607) in view of Overhues et al ("Overhues", U.S. Patent No. 5,112,178). With respect to claim 1, Katagiri discloses a pivotal plate (42), a fixing plate (11), and a rotational shaft (14) inserted to vertical planes of the pivotal plate and fixing plate. A frictional member (15) is mounted around the periphery of the shaft (14), both ends of which have a tightening plane on which an inserting hole is formed (43, 44). A tightening member (20) is inserted into the hole, thereby generating a braking force. Katagiri fails to disclose a plate shaped spacer between the tightening planes.
3. Overhues teaches an arrangement comprising having parallel tightening planes (not shown in drawings), a tightening member (5) and a plate shaped spacer (1) between the tightening planes. Overhues uses the spacer (1) to prevent loosening of the joint (column 1, lines 15, 16). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Katagiri as taught by Overhues, such that Katagiri includes a spacer plate, in order to prevent loosening of the joint.
4. With respect to claim 2, Katagiri discloses the frictional member (15) is formed on a center of the shaft (14).

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5. With respect to claims 4 and 5, Katagiri discloses a washer (71) inserted between contact planes of the fixing and pivotal plates and a frictional housing (19) formed around an outer periphery of the frictional member (15).

6. With respect to claim 6, Katagiri discloses a fixing portion of non-circular shape formed on both ends of the shaft (at 12a).

7. With respect to claims 8 and 9, Katagiri discloses a washer (71) of plastic material inserted on a contact plane between the fixing and pivotal planes, and the frictional member is made of engineering plastic.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katagiri in view of Overhues as applied to claim 1 above, and further in view of Lu (U.S. Patent No. 6,018,847). Neither Katagiri nor Overhues discloses a guiding protuberance or guiding portion as claimed. Lu teaches a hinge comprising a fixing plate (50) and a pivot plate (40). A guiding protuberance (62) is formed on an outside vertical plane of the fixing plate, and a pivotal guiding portion in an arc shape (33) is formed on a vertical plane of the pivot plate. The protuberance is received in the guiding portion. This arrangement limits the range of motion of the hinge. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Katagiri and Overhues to include this arrangement to limit the range of motion of Katagiri's hinge.

9. Claims 10-12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katagiri in view of Lu. With respect to claim 10, Katagiri discloses a pivotal plate (42), fixing

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plate (11), rotational shaft (14), frictional member (15), and tightening member (20) fitted into a hole (43, 44). Katagiri fails to disclose an elastic member and the guiding protuberance and portion.

10. Lu teaches a hinge comprising an elastic member (70), a fixing plate (50), and a pivot plate (40). A guiding protuberance (62) is formed on an outside vertical plane of the fixing plate, and a pivotal guiding portion in an arc shape (33) is formed on a vertical plane of the pivot plate. The protuberance is received in the guiding portion. This arrangement limits the range of motion of the hinge. The elastic member biases the arrangement to a preferred position (column 2, lines 35-45). The elastic member is mounted on a cylindrical spacer (20) that is mounted around a contact plane between the elastic member and the rotational shaft. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Katagiri include this arrangement to limit the range of motion of Katagiri's hinge and bias the hinge to a preferred position.

11. With respect to claims 11, 12, 16, and 17, Lu further shows the elastic member (70) to be a torsion spring in a coil shape, and that one end of the member is hooked on a horizontal plane (in 52) of the fixing plate (50) and the other extended to an inside from a horizontal plane (in 37) of the pivotal plate.

12. With respect to claims 14 and 19, Katagiri discloses the frictional member to be of engineering plastic.

13. Claims 15, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katagiri in view of Lu and Overhues. With respect to claim 15, Katagiri discloses a pivotal plate

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(42), fixing plate (11), rotational shaft (14), frictional member (15), and tightening member (20) fitted into a hole (43, 44). Katagiri fails to disclose an elastic member and the plate shaped spacer.

14. Lu teaches a hinge comprising an elastic member (70), a fixing plate (50), and a pivot plate (40). The elastic member biases the arrangement to a preferred position (column 2, lines 35-45). The elastic member is mounted on a cylindrical spacer (20) that is mounted around a contact plane between the elastic member and the rotational shaft. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Katagiri to bias the hinge to a preferred position.

15. Overhues teaches an arrangement comprising having parallel tightening planes (not shown in drawings), a tightening member (5) and a plate shaped spacer (1) between the tightening planes. Overhues uses the spacer (1) to prevent loosening of the joint (column 1, lines 15, 16). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Katagiri as taught by Overhues, such that Katagiri includes a spacer plate, in order to prevent loosening of the joint.

16. With respect to claim 16 and 17, Lu further shows the elastic member (70) to be a torsion spring in a coil shape, and that one end of the member is hooked on a horizontal plane (in 52) of the fixing plate (50) and the other extended to an inside from a horizontal plane (in 37) of the pivotal plate.

17. With respect to claim 19, Katagiri discloses the frictional member to be of engineering plastic.

Response to Arguments

18. Applicant's arguments with respect to claims 1, 2, 4-6, 8, 9, 15,16, 17, and 19 have been considered but are moot in view of the new ground(s) of rejection. The Overhues patent has been incorporated into the rejection of these claims. The new grounds were not necessitated by applicant's amendment. For this reason, this Office Action is non-final.


19. Applicant's arguments with regard to claims 10 and 15 have been fully considered but they are not persuasive. Applicant argues that neither Katagiri nor Lu disclose the claimed cylindrical spacer. Applicant argues that element 20 of Lu, identified in this Office Action as the cylindrical spacer is different from the claimed cylindrical spacer in that element 20 of Lu couples with pivot 10 to pivotally support carrier 50, whereas in the instant application the cylindrical spacers are used to make the hinge structure operate smoothly. Applicant further asserts that element 20 of Lu is clearly not a spacer. Examiner disagrees. Applicant is attempting to distinguish the instant invention from the prior in terms of function, rather than structure. Element 20 of Lu meets all of the structural limitations of the claimed cylindrical spacer. An apparatus must be distinguished from the prior art in terms of structure rather than function. MPEP 2114. Applicant has not shown how the claim distinguishes the instant invention from the prior art cylindrical spacer. Further, applicant has not provided any support for the allegation that element 20 is "clearly not a spacer". Element 20 meets all claimed limitations of the cylindrical spacer.

Conclusion

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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Kyle whose telephone number is 571-272-7057. The examiner can normally be reached on Monday - Friday, 8:30 am - 5:00 pm.
21. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 571-272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mk


ROBERT J. SANDY
PRIMARY EXAMINER